



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/804,684

03/19/2004

Michael J. Ziegler

1923A1

8171

7590

06/20/2006

PPG INDUSTRIES, INC.
Intellectual Property Department
One PPG Place
Pittsburgh, PA 15272

EXAMINER

SELLERS, ROBERT E

ART UNIT

PAPER NUMBER

1712

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/804,684

Applicant(s)

ZIEGLER ET AL.

Examiner

Robert Sellers

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/14/04 & 5/31/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Art Unit: 1712

1. This application contains claims directed to the following patentably distinct species:

- (a) The epoxy resins and lactones comprising the compound.
- (b) The film-forming resins.
- (c) The crosslinkers

The species are independent or distinct because the wide scope of the epoxy resins, film-forming resins and crosslinkers necessitates burdensome searches throughout class 525.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 1-20 are generic.

A reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species.

MPEP § 809.02(a).

Art Unit: 1712

2. During a telephone conversation with Diane R. Myers on March 30, 2006, a provisional election was made with traverse to prosecute the following species encompassing claims 1-20:

(a) The reaction product of Epon 1009 epoxy resin and ϵ -caprolactone shown in Example 1 on page 10, paragraph 32 of the specification.

(b) The hydroxy-functional polyester of claim 14.

(c) The ϵ -caprolactam-blocked isophorone diisocyanate exhibited in Table A on page 3 (Vestagon EP-B 1400).

Affirmation of this election must be made by applicant in replying to this Office action.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-15 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. Patent No. 4,522,984 and Nakamura et al. Patent No. 5,037,899.

3. Watanabe et al. discloses a powder paint (col. 6, lines 67-68) comprising a lactone-modified epoxy resin prepared by the reaction of Araldite 6097 epoxy resin and ϵ -caprolactone combined with a blocked isocyanate. According to Clope et al. Patent No. 4,105,613, Araldite 6097 is a bisphenol A-epichlorohydrin polymer having an epoxide equivalent weight of from 2000-2500 which converts to a molecular weight of from 4000-5000 based on two epoxy equivalents per weight of the polymer.
4. Nakamura et al. reports a powder coating (col. 5, lines 8-21) prepared from the reaction of a lactone with the reaction product of a bisphenol epoxy resin and a primary amine (col. 1, line 65 to col. 2, line 4) blended with a curing agent. The primary amine of Nakamura et al. is not grafted, but reacted with the epoxy resin prior to the grafting of the lactone, thereby satisfying the requirements of claim 19.
5. The lactone-modified epoxy resins of Watanabe et al. and Nakamura et al. fall within both the hydroxyl group-containing epoxy resin/lactone reaction product of claimed component (a) and film-forming resin (b) since the lactone-modified epoxy resin provides a film upon cure.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. and Nakamura et al. as applied to the claims hereinabove, and further in view of Great Britain Patent No. 1,523,903 and Japanese Patent No. 53-58536.

6. The claimed film-forming resin not comprising epoxy is not recited (Identification of the epoxy as an "epoxy resin" would more concisely denote what is actually absent.).

7. The British patent sets forth a powder coating obtained from a fully blocked polyisocyanate (page 3, lines 18-20) such as the elected species of ϵ -caprolactam-blocked isophorone diisocyanate (page 4, lines 15-18, Isocyanate A), as little as 3.5% by weight (page 6, Table 7, Example 18) of an epoxy resin such as a diglycidyl ether of bisphenol A (page 4, lines 35-36 (diphenylolpropane-epichlorohydrin epoxy resin) and as much as 73.8% by weight of the elected species of hydroxy-functional polyester.

8. The Japanese patent espouses a powder coating produced from 2% by weight of an epoxy resin (CAPLUS abstract, example), an ϵ -caprolactam-blocked isophorone diisocyanate and 68.2% by weight of a hydroxyl-functional polyester.

9. It would have been obvious to formulate the powder coatings of Watanabe et al. and Nakamura et al. via the incorporation of the hydroxyl-functional polyesters of the British and Japanese patents in order to enhance the flow properties and chemical and weathering resistance (British patent, page 1, lines 7-9) and to improve the edge covering properties (Japanese patent abstracts).

Art Unit: 1712

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the British and Japanese patents in view of Watanabe et al. and Nakamura et al..

The references are described hereinabove. The epoxy resins of the British and Japanese patents do not mention the claimed hydroxyl group-containing epoxy resin reacted with a lactone. It would have been obvious to include the lactone-modified epoxy resins of Watanabe et al. and Nakamura et al. in the powder coatings of the British and Japanese patents in order to increase the flexibility and improve the heat and water resistance, low temperature properties and miscibility (Watanabe et al., col. 4, lines 39-40 and Nakamura et al., col. 1, lines 51-55).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Sellers whose telephone number is (571) 272-1093. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).



Robert Sellers
Primary Examiner
Art Unit 1712